EUROPEAN JOURNAL OF PHYCOLOGY
CONTENTS AND INDEX TO
VOLUME 37

The Council of the British Phycological Society wish it to beunderstood that they do not accept responsibility for the accuracy of statements published in the *Journal*, excepting when those statements are contained in an official report of the Council.

Number 1, pp. 1–148, 1 March 2002
Number 2, pp. 149–299, 29 April 2002
Number 3, pp. 301–484, 9 September 2002
Number 4, pp. 485–600, 29 November 2002

ABBOTT I.A. *see* KRAFT 269
AGRELO M. *see* BAOS, CARCÍA-VILLADA, LÓPEZ-RODAS, HIRALDO and COSTAS 593
AGUILAR ROSAS L.E. *see* BROOM, NELSON, YARISH, JONES and AGUILAR ROSAS 227
AGUILAR ROSAS R. *see* BROOM, NELSON, YARISH, JONES and AGUILAR ROSAS 227
ALLISON G. *see* GOUGH, ROGERS and SMITH 419
ALVERCA E., BIEGALA I.C., KENNAWAY G.M., LEWIS J. & FRANCA S. *In situ* identification and localization of bacteria associated with *Gyrodinium instriatum* (Gymnodiniales, Dinophyceae) by electron and confocal microscopy 523
ANDREOLI C. *see* MORO, LA ROCCA, DALLA VALLE, MOSCHIN and NEGRISOLO 103
ARRILUZEA J. *see* TRIGUEROS & ORIVE 571
BALATA D. *see* PIAZZI and CINELLI 69
BAOS R., CARCÍA-VILLADA L., AGRELO M., LÓPEZ-RODAS V., HIRALDO F. & COSTAS E. short-term adaptation of microalgae in highly stressful environments: an experimental model analysing the resistance of *Scenedesmus intermedius* (chlorophyceae) to the heavy metals mixture from the Aznalcóllar mine spill 593
BELLINGER E. *see* KRIVTSOV & SIGEE 27
BERNER T. *see* HADAS, PINKAS, MALINSKY-RUSHANSKY, SHALEV-ALON, DELPHINE, SUKENIK and KAPLAN 259
BIEGALA I.C. *see* ALVERCA, KENNAWAY, LEWIS and FRANCA 523
BILLARD C. *see* GEISEN, BROERSE, CROS, PROBERT and YOUNG 531
BIŠOVÁ K. *see* ZACHLEDER, VÍTOVÁ and HENDRYCHOVÁ 361
BRAUNE W. *see* HAGEN & SIEGMUND 217
BREEMAN A.M., OH Y.S., HWANG M.S. & VAN DEN HOEK C. Evolution of temperature responses in the *Cladophora vagabunda* complex and the *C. albida/sericea* complex (Chlorophyta) 45
BREEMAN A.M. *see* VAN DE POLL, EGGERT and BUMA 59
BROERSE A.T.C. *see* GEISEN, BILLARD, CROS, PROBERT and YOUNG 531
BROOM J.E., NELSON W.A., YARISH C., JONES W.A., AGUILAR ROSAS R. & AGUILAR ROSAS L.E. A reassessment of the taxonomic status of *Porphyra suborbiculata*, *Porphyra carolinensis* and *Porphyra lilliputiana* (Bangiales, Rhodophyta) based on molecular and morphological data 227
BUMA A.G.J. *see* VAN DE POLL, EGGERT and BREEMAN 59
CARCÍA-VILLADA L. *see* BAOS, AGRELO, LÓPEZ-RODAS, HIRALDO and COSTAS 593
CHEN Y.-Q. *see* LANGE and MEDLIN 77
CHOI H.-G., KRAFT G.T., LEE I.K. & SAUNDERS G.W. Phylogenetic analyses of anatomical and nuclear SSU rDNA sequence data indicate that the Dasyaceae and Delesseriaceae (Ceramiales, Rhodophyta) are polyphyletic 551
CINELLI F. *see* PIAZZI & BALATA 69
COSTAS E. *see* BAOS, CARCÍA-VILLADA, AGRELO, LÓPEZ-RODAS and HIRALDO 593
COYER J.A., PETERS A.F., HOARAU G., STAM W.T. & OLSEN J.L. Inheritance patterns of ITS1, chloroplasts and mitochondria in artificial hybrids of the seaweeds *Fucus serratus* and *F. evanescens* (Phaeophyceae) 173
CROS L. *see* GEISEN, BILLARD, BROERSE, PROBERT and YOUNG 531
DAHLMANN J. *see* ORSINI, SARNO, PROCACCINI, POLETTI and MONTRESOR 247
DALLA VALLE L. *see* MORO, LA ROCCA, MOSCHIN, NEGRISOLO and ANDREOLI 103
DANIELIDIS D.B. & MANN D.G. The systematics of *Seminavis* (Bacillariophyta): the lost identities of *Amphora angusta*, *A. ventricosa* and *A. macilenta* 427
DAUGBJERG N. *see* LUNDHOLM and MOESTRUP 115
DAVIDSON K., ROBERTS E.C. & GILPIN L.C. The relationship between carbon and biovolume in marine microbial mesocosms under different nutrient regimes 501
DAVIS D.R. *see* SPAULDING & KOCIOLEK 135
DEAN A. *see* SIGEE, LEVADO and TOBIN 19
DE BROUWER J.F.C., WOLFSTEIN K. & STAL L.J. Physical characterization and diel dynamics of different fractions of extracellular polysaccharides in an axenic culture of a benthic diatom 37
DELIVOPOULOS S.G. Ultrastructure of trichoblasts in the red alga *Osmundea spectabilis* var. *spectabilis* (Rhodomelaceae, Ceramiales) 329
DELPHINE E. *see* HADAS, PINKAS, MALINSKY-RUSHANSKY, SHALEV-ALON, BERNER, SUKENIK and KAPLAN 259
DESTOMBE C. *see* ENGEL, VALERO and LAGADEUC 179
DIBBAYAWAN T.P. *see* WHIFFEN and OVERALL 339
DRAISMA S.G.A., OLSEN J.L., STAM W.T. & PRUD'HOMME VAN REINE W.F. Phylogenetic relationships within the Sphacelariales (Phaeophyceae): *rbc*L, RUBISCO spacer and morphology 385
EGGERT A. *see* VAN DE POLL, BUMA and BREEMAN 59
ENGEL C.R., VALERO M., LAGADEUC Y. & DESTOMBE C. Non-random mating in controlled multiple-donor crosses in *Gracilaria gracilis* (Gracilariaceae, Rhodophyta) 179
EVENS T.J. *see* MILLIE, SCHOFIELD, KIRKPATRICK and JOHNSEN 313
FINK P. *see* VAN HANNEN and LÜRLING 203
FRANCA S. *see* ALVERCA, BIEGALA, KENNAWAY and LEWIS 523
FREDERICQ S. *see* GAVIO 349

FREDERICQ S. *see* LIN & LEWIS 93
FRIEDL T. & O'KELLY C.J. Phylogenetic relationships of green algae assigned to the genus *Planophila* (Chlorophyta): evidence from 18S rDNA sequence data and ultrastructure 373
GAO K. *see* ZOU 587
GAVIO B. & FREDERICQ S. *Grateloupia turuturu* (Halymeniaceae, Rhodophyta) is the correct name of the non-native species in the Atlantic known as *Grateloupia doryphora* 349
GEIDER R.J. & LA ROCHE J. Redfield revisited: variability of C:N:P in marine microalgae and its biochemical basis 1
GEISEN M., BILLARD C., BROERSE A.T.C., CROS L., PROBERT I. & YOUNG J.R. Life-cycle associations involving pairs of holococcolithophorid species: intraspecific variation or cryptic speciation? 531
GILPIN L.C. *see* DAVIDSON & ROBERTS 501
GODHE A. *see* McQUOID and NORDBERG 191
GOUGH K., ALLISON G., ROGERS L. & SMITH A. *In vitro* characterization of the inhibitor resistance of glutamate-1-semialdehyde aminotransferase from the cyanobacterium *Synechococcus* PCC6301 GR6 419
GROSS W., OESTERHELT C., TISCHENDORF G. & LEDERER F. Characterization of a non-thermophilic strain of the red algal genus *Galdieria* isolated from Soos (Czech Republic) 477
HADAS O., PINKAS R., MALINSKY-RUSHANSKY N., SHALEV-ALON G., DELPHINE E., BERNER T., SUKENIK A. & KAPLAN A. Physiological variables determined under laboratory conditions may explain the bloom of *Aphanizomenon ovalisporum* in Lake Kinneret 259
HAGEN C., SIEGMUND S. & BRAUNE W. Ultrastructural and chemical changes in the cell wall of *Haematococcus pluvialis* (Volvocales, Chlorophyta) during aplanospore formation 217
HAGERTHEY S.E. *see* HONEYWILL & PATERSON 485
HARPER J.T. & SAUNDERS G.W. A re-classification of the Acrochaetiales based on molecular and morphological data, and establishment of the Colaconematales *ord. nov.* (Florideophyceae, Rhodophyta) 463
HENDRYCHOVÁ J. *see* ZACHLEDER, BIŠOVÁ and VÍTOVÁ 361
HIRALDO F. *see* BAOS, CARCÍA-VILLADA, AGRELO, LÓPEZ-RODAS and COSTAS 593
HOARAU G. *see* COYER, PETERS, STAM and OLSEN 173
HOMMERSAND M.H. *see* HUGHEY & SILVA 209
HONEYWILL C., PATERSON D.M. & HAGERTHEY S.E. Determination of microphytobenthic biomass using pulse-amplitude modulated minimum fluorescence 485
HUGHEY J.R., SILVA P.C. & HOMMERSAND M.H. ITS1 sequences of type specimens of *Gigartina* and *Sarcothalia* and their significance for the classification of South African Gigartinaceae (Gigartinales, Rhodophyta) 209
HWANG M.S. *see* BREEMAN, OH and VAN DEN HOEK 45
INDA L.A. & PELEATO M.L. Immunoquantification of flavodoxin and ferrodoxin from *Scenedesmus vacuolatus* (Chlorophyta) as iron-stress molecular markers 579
JOHNSEN G. *see* MILLIE, SCHOFIELD, KIRKPATRICK and EVENS 313
JONES W.A. *see* BROOM, NELSON, YARISH, AGUILAR ROSAS and AGUILAR ROSAS 227
KAPLAN A. *see* HADAS, PINKAS, MALINSKY-RUSHANSKY, SHALEV-ALON, DELPHINE, BERNER and SUKENIK 259
KAWAGUCHI S. *see* SHIBATA, YAMAGUCHI, NAGAYAMA and NAKAMURA 493
KENNAWAY G.M. *see* ALVERCA, BIEGALA, LEWIS and FRANCA 523
KIRKPATRICK G.J. *see* MILLIE, SCHOFIELD, JOHNSEN and EVENS 313
KLOAREG B. *see* OUDOT-LE SECQ and LOISEAUX-DE GOËR 163
KOCIOLEK J.P. *see* SPAULDING and DAVIS 135
KRAFT G.T. & ABBOTT I.A. The anatomy of *Neotenophycus ichthyosteus* gen. *et* sp. nov. (Rhodomelaceae, Ceramiales), a bizarre red algal parasite from the central Pacific 269
KRAFT G.T. *see* CHOI, LEE and SAUNDERS 551
KRIVTSOV V., SIGEE D. & BELLINGER E. Elemental concentrations and correlations in winter micropopulations of *Stephanodiscus rotula*: an autecological study over a period of cell size reduction and restoration 27
LAGADEUC Y. *see* ENGEL, VALERO and DESTOMBE 179
LANGE M., CHEN Y.-Q. & MEDLIN L.K. Molecular genetic delineation of *Phaeocystis* species (Prymnesiophyceae) using coding and non-coding regions of nuclear and plastid genomes 77
LA ROCCA N. *see* MORO, DALLA VALLE, MOSCHIN, NEGRISOLO and ANDREOLI 103
LA ROCHE J. *see* GEIDER 1
LEDERER F. *see* GROSS, OESTERHELT and TISCHENDORF 477
LEE E.-Y., PEDERSEN P.M. & LEE I.K. *Neoleptonema yongpilii* E.-Y. Lee & I.K. Lee, gen. et sp. nov. (Phaeophyceae), based on morphological characters and RuBisCO spacer sequences 237
LEE I.K. *see* CHOI, KRAFT and SAUNDERS 551
LEE I.K. *see* LEE & PEDERSEN 237
LEÓN-TEJERA H. *see* MONTEJANO 323
LEVADO E. *see* SIGEE, DEAN and TOBIN 19
LEWIS J. *see* ALVERCA, BIEGALA, KENNAWAY and FRANCA 523
LEWIS J.E. *see* LIN and FREDERICQ 93
LIN S.-M., LEWIS J.E. & FREDERICQ S. *Drachiella liaoii* sp. nov., a new member of the Schizoserideae (Delesseriaceae, Rhodophyta) from Taiwan and the Philippines 93
LOISEAUX-DE GOËR S. *see* OUDOT-LE SECQ & KLOAREG 163
LÓPEZ-RODAS V. *see* BAOS, CARCÍA-VILLADA, AGRELO, HIRALDO and COSTAS 593
LUNDHOLM N., DAUGBJERG N. & MOESTRUP Ø. Phylogeny of the Bacillariaceae with emphasis on the genus *Pseudo-nitzschia* (Bacillariophyceae) based on partial LSU rDNA 115
LÜRLING M. *see* VAN HANNEN & FINK 203
McQUOID M.R., GODHE A. & NORDBERG K. Viability of phytoplankton resting stages in the sediments of a coastal Swedish fjord 191
MALINSKY-RUSHANSKY N. *see* HADAS, PINKAS, SHALEV-ALON, DELPHINE, BERNER, SUKENIK and KAPLAN 259
MANN D.G. *see* DANIELIDIS 427
MEDLIN L.K. *see* LANGE & CHEN 77
MILLIE D.F., SCHOFIELD O.M.E., KIRKPATRICK G.J., JOHNSEN G. & EVENS T.J. Using absorbance and fluorescence spectra to discriminate microalgae 313
MOESTRUP Ø. *see* LUNDHOLM & DAUGBJERG 115
MONTEJANO G. & LEÓN-TEJERA H. Reproduction and baeocyte formation in two species of *Dermocarpella* (Cyanophyceae) 323
MONTRESOR M. *see* ORSINI, SARNO, PROCACCINI, POLETTI and DAHLMANN 247
MORO I., LA ROCCA N., DALLA VALLE L., MOSCHIN E., NEGRISOLO E. & ANDREOLI C. *Pyramimonas australis* sp. nov. (Prasinophyceae, Chlorophyta) from Antarctica: fine structure and molecular phylogeny 103
MOSCHIN E. *see* MORO, LA ROCCA, DALLA VALLE, NEGRISOLO and ANDREOLI 103
MURRAY S. & PATTERSON D.J. The benthic

dinoflagellate genus *Amphidinium* in south-eastern Australian waters, including three new species 279
NAGAYAMA K. *see* SHIBATA, YAMAGUCHI, KAWAGUCHI and NAKAMURA 493
NAKAMURA T. *see* SHIBATA, YAMAGUCHI, NAGAYAMA and KAWAGUCHI 493
NEGRISOLO E. *see* MORO, LA ROCCA, DALLA VALLE, MOSCHIN and ANDREOLI 103
NELSON W.A. *see* BROOM, YARISH, JONES, AGUILAR ROSAS and AGUILAR ROSAS 227
NORDBERG K. *see* McQUOID & GODHE 191
OESTERHELT C. *see* GROSS, TISCHENDORF and LEDERER 477
OH Y.S. *see* BREEMAN, HWANG and VAN DEN HOEK 45
O'KELLY C.J. *see* FRIEDL 373
OLSEN J.L. *see* COYER, PETERS, HOARAU and STAM 173
OLSEN J.L. *see* DRAISMA, STAM and PRUD'HOMME VAN REINE 385
ORIVE E. *see* TRIGUEROS and ARRILUZEA 571
ORSINI L., SARNO D., PROCACCINI G., POLETTI R., DAHLMANN J. & MONTRESOR M. Toxic *Pseudo-nitzschia multistriata* (Bacillariophyceae) from the Gulf of Naples: morphology, toxin analysis and phylogenetic relationships with other *Pseudo-nitzschia* species 247
OUDOT-LE SECQ M.-P., KLOAREG B. & LOISEAUX-DE GOËR S. The mitochondrial genome of the brown alga *Laminaria digitata*: a comparative analysis 163
OVERALL R.L. *see* WHIFFEN & DIBBAYAWAN 339
PATERSON D.M. *see* HONEYWILL and HAGERTHEY 485
PATTERSON D.J. *see* MURRAY 279
PEDERSEN P.M. *see* LEE and LEE 237
PELEATO M.L. *see* INDA 579
PETERS A.F. *see* COYER, HOARAU, STAM and OLSEN 173
PIAZZI L., BALATA D. & CINELLI F. Epiphytic macroalgal assemblages of *Posidonia oceanica* rhizomes in the western Mediterranean 69
PICKETT-HEAPS J.D. *see* WILSON and WEST 509
PINKAS R. *see* HADAS, MALINSKY-RUSHANSKY, SHALEV-ALON, DELPHINE, BERNER, SUKENIK and KAPLAN 259
POLETTI R. *see* ORSINI, SARNO, PROCACCINI, DAHLMANN and MONTRESOR 247
PROBERT I. *see* GEISEN, BILLARD, BROERSE, CROS and YOUNG 531
PROCACCINI G. *see* ORSINI, SARNO, POLETTI, DAHLMANN and MONTRESOR 247
PRUD'HOMME VAN REINE W.F. *see* DRAISMA, OLSEN and STAM 385
PURTON S. *see* SMITH 301
ROBERTS E.C. *see* DAVIDSON and GILPIN 501
ROGERS L. *see* GOUGH, ALLISON and SMITH 419
SANDERCOCK B. *see* ZUCCARELLO and WEST 403
SARNO D. *see* ORSINI, PROCACCINI, POLETTI, DAHLMANN and MONTRESOR 247
SAUNDERS G.W. *see* CHOI, KRAFT and LEE 551
SAUNDERS G.W. *see* HARPER 463
SCHOFIELD O.M.E. *see* MILLIE, KIRKPATRICK, JOHNSEN and EVENS 313
SHALEV-ALON G. *see* HADAS, PINKAS, MALINSKY-RUSHANSKY, DELPHINE, BERNER, SUKENIK and KAPLAN 259
SHIBATA T., YAMAGUCHI K., NAGAYAMA K., KAWAGUCHI S. & NAKAMURA T. Inhibitory activity of brown algal phlorotannins against glycosidases from the viscera of the turban shell *Turbo cornutus* 493
SIEGMUND S. *see* HAGEN and BRAUNE 217
SIGEE D. *see* KRIVTSOV and BELLINGER 27
SIGEE D.C., DEAN A., LEVADO E. & TOBIN M.J. Fourier-transform infrared spectroscopy of *Pediastrum duplex*: characterization of a micro-population isolated from a eutrophic lake 19
SILVA P.C. *see* HUGHEY and HOMMERSAND 209
SMITH A. *see* GOUGH, ALLISON and ROGERS 419
SMITH A.C. & PURTON S. Review: The transcriptional apparatus of algal plastids 301
SPAULDING S.A., KOCIOLEK J.P. & DAVIS D.R. A new diatom (Bacillariophyceae) genus with two new species from New Mexico, USA 135
STAL L.J. *see* DE BROUWER & WOLFSTEIN 37
STAM W.T. *see* COYER, PETERS, HOARAU and OLSEN 173
STAM W.T. *see* DRAISMA, OLSEN and PRUD'HOMME VAN REINE 385
SUKENIK A. *see* HADAS, PINKAS, MALINSKY-RUSHANSKY, SHALEV-ALON, DELPHINE, BERNER and KAPLAN 259
THORNTON D.C.O. Review: Diatom aggregation in the sea: mechanisms and ecological implications 149
TISCHENDORF G. *see* GROSS, OESTERHELT and LEDERER 477
TOBIN M.J. *see* SIGEE, DEAN and LEVADO 19
TRIGUEROS J.M., ORIVE E. & ARRILUZEA J. Observations on *Chaetoceros salsugineus* (Chaetocerotales, Bacillariophyceae): first record of this bloom-forming diatom in a European estuary 571
UNDERWOOD G.J.C. Adaptations of tropical marine microphytobenthic assemblages along a gradient of light and nutrient availability in Suva Lagoon, Fiji 449
VALERO M. *see* ENGEL, LAGADEUC and DESTOMBE 179
VAN DEN HOEK C. *see* BREEMAN, OH and HWANG 45
VAN DE POLL W.H., EGGERT A., BUMA A.G.J. & BREEMAN A.M. Temperature dependence of UV radiation effects in Arctic and temperate isolates of three red macrophytes 59
VAN HANNEN E.J., FINK P. & LÜRLING M. A revised secondary structure model for the internal transcribed spacer 2 of the green algae *Scenedesmus* and *Desmodesmus* and its implication for the phylogeny of these algae 203
VÍTOVÁ M. *see* ZACHLEDER, BIŠOVÁ and HENDRYCHOVÁ 361
WEST J.A. *see* WILSON & PICKETT-HEAPS 509
WEST J.A. *see* ZUCCARELLO & SANDERCOCK 403
WHIFFEN L.K., DIBBAYAWAN T.P. & OVERALL R.L. High-resolution microscopy of cell wall formation in regenerating *Mougeotia* (Chlorophyceae) protoplasts 339
WILSON S.M., PICKETT-HEAPS J.D. & WEST J.A. Fertilization and the cytoskeleton in the red alga *Bostrychia moritziana* (Rhodomelaceae, Rhodophyta) 509
WOLFSTEIN K. *see* DE BROUWER and STAL 37
YAMAGUCHI K. *see* SHIBATA, NAGAYAMA, KAWAGUCHI and NAKAMURA 493
YARISH C. *see* BROOM, NELSON, JONES, AGUILAR ROSAS and AGUILAR ROSAS 227
YOUNG J.R. *see* GEISEN, BILLARD, BROERSE, CROS and PROBERT 531
ZACHLEDER V., BIŠOVÁ K., VÍTOVÁ M. & HENDRYCHOVÁ J. Variety of cell cycle patterns in the alga *Scenedesmus quadricauda* (Chlorophyta) as revealed by application of illumination regimes and inhibitors 361
ZOU D. & GAO K. Effects of desiccation and CO_2 concentrations on emersed photosynthesis in *Porphyra haitanensis* (Bangiales, Rhodophyta), a species farmed in China 587
ZUCCARELLO G.C., SANDERCOCK B. & WEST J.A. Diversity within red algal species: variation in world-wide samples of *Spyridia filamentosa* (Ceramiaceae) and *Murrayella periclados* (Rhodomelaceae) using DNA markers and breeding studies 403

SUBJECT INDEX

absorbance, 313
acidophilic algae, 477
Acrochaetiaceae, 463
Acrochaetiales, 463
actin, 509
adaptation, 45, 593
aggregate, 149
algae, 59, 93
algaenan, 217
algal cell wall, 217
algal epiphytes, 69
algal monitoring, 313
alkaline phosphatase, 259
aluminium, 27
4-amino-5-fluoropentanoic acid, 419
δ-aminolaevulinic acid, 419
anoxia, 191
Antarctica, 103
Aphanizomenon ovalisporum, 259
axenic culture, 37
Aznalcóllar, 593
Bacillariaceae, 115
Bacillariophyceae, 135
Bacillariophyta, 429
baeocyte, 323
Bangiaceae, 227
benthos, 149
biofilms, 449
biogeochemistry, 149
biogeography, 45, 77, 349
biomass, 485
biovolume, 501
brown algae, 163, 493
carbohydrate, 1
carbon, 1, 501
cell cycle patterns, 361
cell diameter, 27
cell quotas, 27
cell wall, 339
cellulose microfibrils, 339
Ceramiaceae, 551
Ceramiales, 93, 269, 551
Chaetoceros salsugineus, 571
Chlorella, 373
Chlorophyceae, 373
chlorophyll *a*, 485
Choristocarpaceae, 385
Chroococcales, 323
Cladophora albida, 45
Cladophora capensis, 45
Cladophora dalmatica, 45
Cladophora flexuosa, 45
Cladophora laetevirens, 45
Cladophora opaca, 45
Cladophora sericea, 45
Cladophora vagabunda, 45
Cladostephaceae, 385
CO_2, 587
coagulation, 149
coccolithophorids, 531
Colaconemataceae *fam. nov.*, 463
Colaconematales *ord. nov.*, 463
compensating base pair changes, 203
confocal microscopy, 523
coral reefs, 449
*cox*2-3 spacer, 403
CPDs, 59
cryptic speciation, 531
cryptic species, 403
Cyanidiaceae, 477
Cyanobacteria, 323
Cyanophyceae, 323
cycloheximide, 361
cyst, 191
daily cycle, 37
Dasyaceae, 551
Dasyoideae, 551
Delesseriaceae, 93, 551
Dermocarpella gardneri, 323
Dermocarpella stellata, 323
desiccation, 587
Desmodesmus, 203
development, 329
diatoms, 37, 115, 191, 247, 429, 485
dinoflagellate, 191
dinoflagellates, 523
Dinophyceae, 279
DNA, 209
DNA damage, 59
DNA replication, 361
domoic acid, 115, 247
Doñana National Park, 593
Drachiella liaoii sp. nov., 93
ecology, 571
Eisenia bicyclis, 493
Elachistaceae, 237
elemental associations, 27
emersion, 587
Episporium, 269
EPS, 37, 149, 449
estuary, 571
Euglena mutabilis, 477
evolution of mitochondria, 163
extracellular matrix, 217
extracellular polymeric substances, 37
feeding deterrent, 493
ferrodoxin, 579
fertilization, 179, 509
fertilization pore, 509
field emission scanning electron microscopy, 339
flagellar apparatus, 373
flavodoxin, 579
Florideophyceae, 463
fluorescence, 313
5-fluorodeoxyuridine, 361
flux, 149
fourth-derivative analysis, 313
Fragilariopsis, 115
freeze tolerance, 477
FTIR analysis, 19
α-fucosidase, 493
Fucus evanescens, 173
Fucus serratus, 173
F_v/F_m, 59
gabaculine resistance, 419
Galdieria sulphuraria, 477
Gigartina, 209
Gigartinaceae, 209
glutamate-1-semialdehyde aminotransferase, 419
glycosidase inhibition, 493
Grateloupia doryphora, 349
Grateloupia turuturu, 349
green algae, 19
Group I intron, 227

growth, 45, 59
Gyrodinium instriatum, 523
Halymeniaceae, 349
haptophytes, 531
heterokonts, 163
Heterosiphonioideae, 551
heterotrophy, 477
holococcolith–heterococcolith combinations, 531
hybrids, 173
illumination regime, 361
in situ hybridization, 523
internal transcribed spacer 2, 203
intracellular bacteria, 523
intraspecific variation, 531
invasion, 69
invasive alga, 349
iron stress, 579
ITS, 227
ITS1, 77, 209
ITS1, 173
$K_{1/2}(HCO_3^-, CO_2)$, N:Pi ratio, 259
Laminaria digitata, 163
laminated sediment, 191
large subunit rRNA, 403
large-subunit rDNA, 463
life-cycles, 531
lipid, 1
LSU rDNA, 93, 115, 247
macrophytes, 59
male competition, 179
marine benthic diatoms, 429
marine snow, 149
mate choice, 179
Mediterranean, 69
Mediterranean Sea, 247
mesocosms, 501
methods, 37
Mexico, 323
microalgae, 593
microbial, 501
microphytobenthos, 37, 449, 485
microtubules, 339
minimum fluorescence, 485
mitochondrial DNA, 163
molecular analysis, 19
molecular markers, 579
molecular probes, 247
molecular systematics, 349, 463
morphology, 115, 247, 385, 429, 571
Mougeotia, 339
MPN, 191
mucilage, 149
multiple fission, 323
Murrayella periclados, 403
mutation, 593
myosin, 509
nad, 1, 173
Naviculales, 135
Neoleptonema yongpilii gen. et sp. nov., 237
Neotenophyceae, 269
Neotenophycus, 269
NEP, 301
new taxa, 429
New Zealand, 227
nitrogen, 1, 501
Nitzschia, 115
North Spain, 571
nuclear division, 361
nuclear migration, 509
nuclear small-subunit rDNA, 551
nuclear SSU, 227
oligonucleotide probes, 523
Onslowiaceae, 385
optimal quantum yield, 59
organelle inheritance, 173
Osmundea spectabilis var. *spectabilis*, 329
parasite, 269
parsimony, 203
PCR, 103, 209
Pediastrum, 19
pelagic, 149
PEP, 301
pH, 259
Phaeocystis, 77
Philippines, 93
phlorotannin, 493
phosphorus, 1, 27
photosynthesis, 259, 449, 587
phylogenetic relationships, 237
phylogeny, 45, 77, 93, 103, 115, 135, 203, 247, 349, 385, 463, 551
phytoplankton, 1, 19
Planophila, 373
plastid, 301
playa lakes, 135
Playaensis circumfibria, 135
Playaensis furtiva, 135
plurilocular sporangia, 237
Porphyra carolinensis, 227
Porphyra haitanensis, 587
Porphyra lilliputiana, 227
Porphyra suborbiculata, 227
Posidonia oceanica, 69
potassium, 27
Prasinophyceae, 103
Prasiola, 373
protein, 1
protein content, 361
protists, 279
protoplasts, 339
Prymnesiophyceae, 77
Pseudococcomyxa simplex, 477
Pseudo-nitzschia, 115, 247
Pseudo-nitzschia multistriata, 247
Pyramimonas australis, 103
*rbc*L, 349, 385, 403
*rbc*L gene, 103
red algae, 209, 227, 587
Redfield ratio, 1
reproduction, 323
reproductive compatibility, 403
reproductive success, 179
resistance, 593
resting cells, 217
resting stages, 191
rhizomes, 69
Rhodomelaceae, 269, 551
Rhodophyta, 93, 227, 269, 329, 349, 463, 551
RNA content, 361
RNA polymerase, 301
Ross Sea, 103
18S rRNA phylogeny, 373
RUBISCO spacer, 77, 173, 385, 403
RuBisCO spacer sequences, 237
18S rDNA, 227
18S rRNA, 77
sand-dwelling, 279
Sarcothalia, 209
Scenedesmus, 203
Scenedesmus quadricauda, 361
Schizoserideae, 93
seagrass beds, 449
seaweed, 587
secondary structure model, 203
sediment, 485

Seminavis, 429
sexual selection, 179
sigma factors, 301
silicon, 27, 501
similarity indices, 313
sinking, 149
small sub-unit rDNA, 463
South Africa, 209
spermatia, 179
spermatial mitosis, 509
Sphacelariaceae, 385
Sphacelariales, 385
spore, 191
sporopollenin-like material, 217
Spyridia filamentosa, 403
Spyridia hypnoides, 403
SSCP, 173
SSU rDNA gene, 103
Stephanodiscus rotula, 27
Stichococcus, 373
structural model, 27
Stypocaulaceae, 385
survival, 191
synchronous cultures, 361
systematics, 227, 551
Taiwan, 93
taxonomy, 115, 269, 349, 429
TEM, 523
temperature, 59, 259
temperature optimum, 477
temperature tolerance, 45
Terra Nova Bay, 103
time-lapse videomicroscopy, 509
toxic algae, 247
toxic spill, 593
transcription, 301
Trebouxiophyceae, 373
trichoblasts, 329
trilaminar sheath, 217
tripartite crystalline layer, 217
tropical, 449
turban shell, 493
Turbo cornutus, 493
type material, 209
ultrastructure, 103, 329, 373, 523
Ulvophyceae, 373
unarmoured, 279
UV radiation, 59
UVAR, 59
UVBR, 59
vertical migration, 449
X-ray microanalysis, 27